

# Environmental Issues Associated With Operation Enduring Freedom

By Mr. Robert J. Chartier

Military action in Operation Enduring Freedom was the first measurement of the concepts of integrating environmental considerations in military operations since the June 2000 publication of Field Manual (FM) 3-100.4, *Environmental Considerations in Military Operations*. According to the manual, "National security strategy and operational end states support lasting victories. End states include environmental components."<sup>1</sup> In the first year of deployment to Afghanistan and Uzbekistan, U.S. forces faced numerous challenges in meeting these end states related to protecting the environment from the effects of the coalition footprint and protecting the force from existing environmental hazards. These hazards, in many cases, were the result of years of inconsistent application of environmental laws, regulations, and programs by the host nation. Without host nation laws and regulations, U.S. forces were required to default back to U.S. environmental policy requiring that all joint U.S. military operations include effective environmental integration. U.S. Army engineers on joint staffs and below are responsible for incorporating environmental considerations into military operation plans (OPLANS) and operation orders (OPORDS). However, it is the responsibility of soldiers to execute the Army's environmental mission, whether deployed or at their home station. This article discusses Operation Enduring Freedom environmental considerations as a command guidance issue.

## Levels of Environmental Consideration

Even though Department of Defense Directive (DODD) 6050.7, *Environmental Effects Abroad of Major Department of Defense Actions*, specifically



The leaking containers at right should be in the plastic-lined pit at left. Unopened containers at left should be stored elsewhere.

exempts combat operations from meeting environmental requirements, it was an assumption in the combatant commander's OPORD that press coverage and worldwide public interests could scrutinize U.S. environmental security actions. This assumption becomes reality if leaders at all levels fail to recognize the impacts of their operations on the environment. Joint Publication (JP) 4-04, *Joint Doctrine for Civil Engineering Support*, states, "Joint Forces Commands (JFCs) should demonstrate proactive environmental leadership, instill environmental ethics, and promote environmental awareness throughout the joint force."<sup>2</sup> Consideration for the environment is nothing more than the integration and application of environmental risk management incorporating all aspects of the natural environment as they interact with the conduct of military operations. This process can be as simple as conducting oil spill battle drills or as complex as avoiding environmentally sensitive areas. Thus, in the context of risk management, environmental considerations should receive a minimum level of thought no matter what conditions and constraints U.S. forces operate under. Environmental considerations need not become mission-constraining.

FM 3-0, *Operations*, states, "As missions change from promoting peace to deterring war itself, the combination of and transition between these operations require skillful assessment, planning, preparation, and execution."<sup>3</sup> This holds just as true when considering the environment depicted in Figure 1, page 25. It shows how the level of environmental considerations changes as the intensity of operations



A prescribed burn at the Baghram landfill sends smoke from incomplete combustion blowing across the base camp.

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transitions from peacetime operations through the employment of forces and back to peacetime operations. As operations transition from peacetime to wartime, the opportunity to fully incorporate environmental considerations decreases. However, once in theater, there are still opportunities to incorporate environmental considerations into daily activities whether forces are employed in high-intensity conflict (HIC) operations such as direct combat or low-intensity conflict (LIC) operations such as peace enforcement. The shaded area of Figure 1 depicts an area between pure LIC and HIC operations where the level of environmental consideration may fluctuate within any given time.

The base camp is the most logical setting for this transition to occur, because hostilities have likely decreased and force protection levels and work priorities allow increased efforts in other areas, such as the environment. The relationship between Karshi Khanabad—the base camp in Uzbekistan—and those in Afghanistan exemplifies this point. Karshi Khanabad supported operations in Afghanistan and was not involved in direct combat operations. Thus environmental considerations were integrated into daily activities from the base camp design stage to present-day operations.

In Afghanistan, the base camps at Kandahar and Baghram progressed more slowly, because the primary concern was force protection. As force protection infrastructure improved, such as the establishment of a fixed perimeter, more effort was focused on environmental issues. These issues included waste stream and wash rack operations, construction of landfills, and construction of hazardous waste and used oil collection points. A disparity also existed between the base camps within Afghanistan: Baghram was a more primitive camp than Kandahar, so environmental initiatives had yet to be elevated in the priority of work. However, environmental conditions that presented an acute health hazard received the highest priority at all base camps and were quickly resolved. This included construction of consolidated landfills and information messages to help soldiers avoid potential chemically contaminated sites.



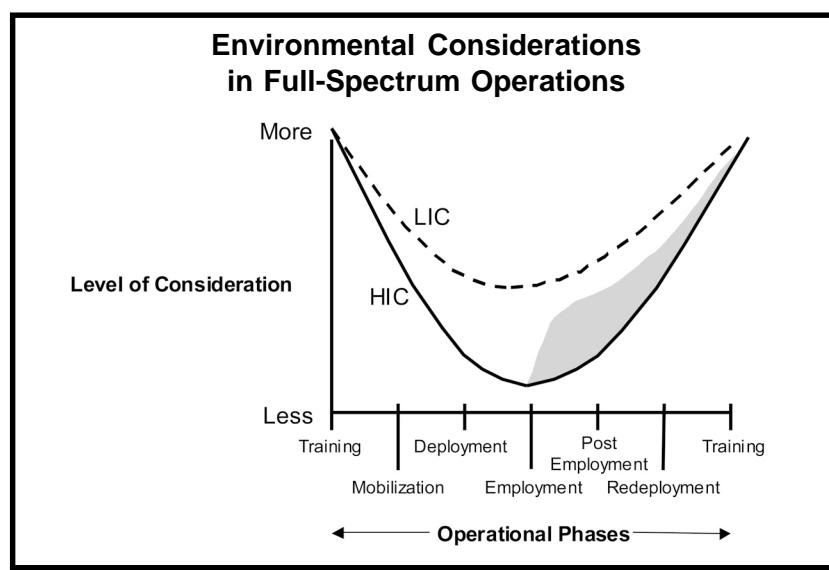
**There were no controls over material placed in this Baghram landfill.**

## Environmental Guidance

**E**nvironmental guidance was provided from three command levels, each with varying degrees of success. The combatant commander of U.S. Army Central Command (ARCENT) issued Environmental Annex L, *Environmental Considerations*, to the OPORD and directed that environmental baseline surveys be conducted at the proposed base camps. The coalition joint task force (CJTF) commander issued an OPORD (mirroring the combatant commander's OPORD), a trifold environmental user's guide, a task force Contingency Environmental Guide, and an environmental policy memorandum. The local base operations (BASOPS) commanders also issued two policies governing actions on the base camps.

### ARCENT Guidance

Annex L, produced three months after the initial deployment of forces, was written by the Joint Forces Command engineer staff. This annex provided the groundwork for resolving situations where real or perceived conflict existed between environmental protection and mission accomplishment. The annex directed that preservation of the natural environment



**Figure 1. Levels of Environmental Consideration**

**A lack of secondary containment structures at this pump location allows leaking fuel to contaminate the ground and possibly the groundwater.**



should not be ignored in the execution of orders but that environmental considerations would always be subordinate to the preservation of human life and force protection. These statements, and the publishing of the annex three months into the initial deployment, made environmental considerations a nonissue for the initial deployment forces. This presented a challenge for leaders during relief-in-place operations because follow-on forces continued to operate in the same manner as the initial force even though Annex L existed. This was a result of the nature of the relief-in-place operations and the use of fragmentary orders (FRAGOs) that never required the review of the annex.

Annex L contained very descriptive information and requirements that would have helped follow-on forces if the information had been disseminated effectively. The annex was composed chiefly from the requirements in Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*, which provided extensive guidance through all phases of the operation, from predeployment to redeployment. This included requirements for assigning unit-level environmental coordinators; conducting predeployment training; obtaining required manuals; and shipping adequate storage containers

and spill containment and cleanup materials. Commanders were also required to provide familiarization training covering the contents of Annex L, unit-level plans, and standard operating procedures. This information could have prevented the waste stream problems that occurred later in the deployment, including two lithium battery fires due to improper storage procedures. Had they referred to FM 3-100.4, each member of the staff would have had clear guidance on conducting their respective missions in coordination with the commander's intent.

As the first in-theater measure, the combatant commander requested that the Corps of Engineers and the Center for Health Protection and Preventive Medicine (CHPPM) conduct separate surveys. The surveys detailed existing environmental conditions at sites selected for base camps and were conducted within the first four months of Operation Enduring Freedom. Engineers conducted an environmental baseline survey (EBS) to document existing environmental conditions for use in base camp planning. When U.S. forces depart, the survey will also be used as a basis for comparison against a site closure report that documents the end state condition of the sites. U.S. forces effectively become the caretakers of the sites and under international law are subject to litigation for any environmental damage not justified under the laws of war. Both the EBS and site closure reports are critical documents that record activities of U.S. forces and are maintained with the resident facility engineer team, which doctrinally assumes the role of the deployed public works directorate. Examples of an EBS and a site closure report are available in FM 3-100.4.

CHPPM surveyed environmental conditions to determine the potential for both short- and long-term health implications on the force. This information was used to conduct a force health protection risk analysis for each site with risk mitigation procedures published as a FRAGO almost five months after the last survey. The FRAGO reached the maneuver forces much quicker and was more effective in providing environmental information than either Annex L or the policy memorandums from the maneuver or BASOPS commanders.



**Improper disposal of lithium batteries presents a fire hazard.**

## CJTF Guidance

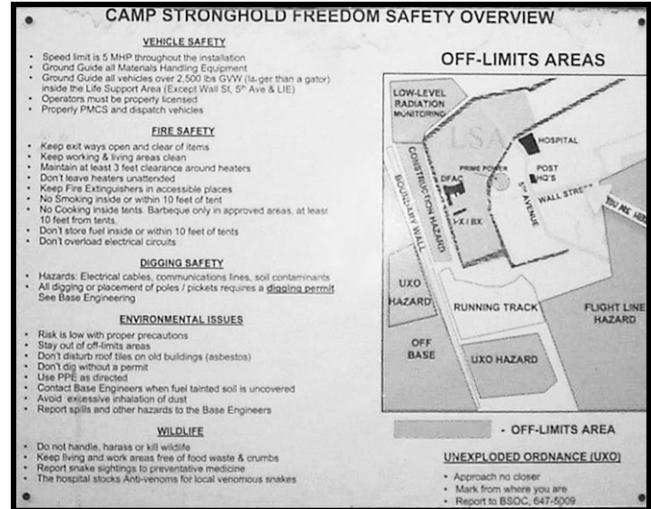
The next in-theater measure was the publication of CJTF guidance documents aimed at maintaining a high level of environmental quality during contingency operations. The CJTF developed its guidance about ten months into Operation Enduring Freedom, using Annex L, the EBS, and the CHPPM survey. In addition, U.S. Air Force doctrine and reachback to the Air Force Center for Environmental Excellence were used, because the resident expert in the CJTF engineer staff was an Air Force officer who was most familiar with Air Force procedures. As U.S. doctrine shifts to the Future Force, more headquarters staffs will become joint services. Therefore, commanders must be prepared to use all available assets and work potential intraservice doctrinal differences to provide the most adequate information to the force.

## BASOPS Guidance

The final level of in-theater environmental guidance, developed by the facility engineer team assigned to the BASOPS, was directed at forces conducting life-support activities on base camps. The environmental engineer assigned to the team was tasked with developing and implementing this guidance while working within force protection priorities assigned by the CJTF and task force commanders. This was often difficult, because no resident environmental representative was on the task force engineer staff to champion environmental initiatives. This resulted in a disruption of environmental information reaching maneuver units and prevented environmental concerns from being addressed to soldiers at the lowest level. In Kandahar and Baghram, the BASOPS commander addressed these issues during the daily battle update briefing, once they were elevated to his level. Future plans called for incorporating this information into the in-process briefing for soldiers and for conducting unit environmental assessments. Karshi Khanabad provided this information to soldiers in the in-process briefing and through command information programs such as information boards (Figure 2) and policy letters. Facility engineer teams that deployed with an environmental engineer were better prepared and more aggressive in developing and providing this information to soldiers. The environmental engineer, often without support, conducted small cleanup operations and trained soldiers one-on-one as the situation arose. This individual should be regarded as a valuable asset when assessing mission-manning requirements.

## Conclusion

The U.S. Army Engineer School is the Army proponent for integrating environmental considerations into doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) and military operations. As the proponent, engineer leaders at all staff levels must be prepared to champion mission-focused environmental considerations as outlined in FM 3-100.4. Higher-level guidance documents such as an overseas environmental baseline guidance document or a foreign governing standard



**Figure 2. An information board at a base camp provides environmental and safety information to newcomers.**

are not detailed enough to provide useful information to maneuver forces. Thus engineers at a minimum must ensure that an environmental annex is developed and disseminated to the force in the earliest stages of the operation. They must also ensure that an environmental criterion receives the appropriate visibility in the commander's critical information requirement. This information is necessary for leaders and soldiers because they are likely to endanger themselves and the environment unnecessarily. Ultimately, U.S. forces are bound by an environmental ethic equal to that found in the United States and should be provided the direction to act accordingly.

## Endnotes

<sup>1</sup> FM 3-100.4 *Environmental Considerations in Military Operations*, 15 June 2000, p. 1-1.

<sup>2</sup> JP 4-04, *Joint Doctrine for Civil Engineering Support*, 27 September 2001, p. xii.

<sup>3</sup> FM 3-0, *Operations*, 14 June 2001, p. 1-16, 17, para 1-49.

## References

AR 200-1, *Environmental Protection and Enhancement*, 21 February 1997.

DODD 6050.7, *Environmental Effects Abroad of Major Department of Defense Actions*, 31 March 1979.

FM 3-0, *Operations*, 14 June 2001.

FM 3-100.4, *Environmental Considerations in Military Operations*, 15 June 2000.

JP 4-04, *Joint Doctrine for Civil Engineering Support*, 27 September 2001.

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